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FEDERAL COMMUNICATIONS COMMISSION
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry Concerning the Deployment of	)	
Advanced Telecommunications	)	
Capability to All Americans in a Reasonable	)	CC Docket No. 98-146
and Timely Fashion, and Possible Steps	)	
to Accelerate Such Deployment	)	
Pursuant to Section 706 of the	)	
Telecommunications Act of 1996	)	

REPLY COMMENTS OF SKYBRIDGE

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Its Attorneys

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SkyBridge L.L.C. ("SkyBridge"), by its attorneys, hereby submits these reply comments in response to the comments filed with respect to the Notice of Inquiry ("NOI") released by the Federal Communications Commission (the "FCC" or "Commission") in the above-captioned proceeding.[1/] In the NOI, the Commission requested comment on how best to effectuate its mandate to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans," as established by Congress in Section 706 of the Telecommunications Act of 1996.[2/]

SkyBridge filed comments in the instant proceeding ("SkyBridge Comments"), explaining that broadband satellite systems, such as the SkyBridge system, will provide an

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1/ FCC 98-187, CC Docket No. 98-146 (Aug. 7, 1998).

2/ Pub. L. 104-104, Title VII, §706, Feb. 8, 1996, 110 Stat. 153, reproduced in the notes under 47 U.S.C. §157.

expeditious and cost-effective means of delivering advanced telecommunications services to all Americans -- whether in urban, suburban, rural or extremely remote areas -- on an equal basis. Many commenters similarly recognized the urgent need for rapid deployment of broadband capacity[3/] and the ability of satellite systems to provide such capacity.[4/]

In these reply comments, SkyBridge further discusses the acute need for advanced telecommunications services in rural areas, and the fact that satellite systems are an efficient means of delivering those broadband services in a cost-effective and timely manner. SkyBridge also urges the Commission to fulfill the Congressional mandate by allowing the most efficient use of spectrum that is technically feasible.

I. There is an Urgent Need for Broadband Services in Rural Communities that Satellite Systems, such as the SkyBridge System, Are Uniquely Situated to Fulfill.

The current need for access to broadband services in rural areas was noted by a number of commenters.[5/] The Rural Telephone Group, for example, noted that "rural communities need broadband capability that can support high-speed Internet access and data services, and rural communities need advanced graphics and video capabilities and services

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3/ See, e.g., Comments of the Rural Telecommunications Group ("RTG Comments"); Comments of the Rural Policy Research Institute, Rural Telecommunications Panel ("RUPRI Comments") at 2; Comments of United Homeowners Association, *et. al.* at 5 ("United Homeowners Comments").

4/ See Comments of Teledesic LLC at 2-5 ("Teledesic Comments"); Comments of PanAmSat Corporation at 2 ("PanAmSat Comments"); Comments of BellSouth Corporation at 26 ("BellSouth Comments").

5/ See, *e.g.*, RTG Comments at iii; United Homeowners Comments at 6.

because they are more dependent on telecommunication services than other communities.[6/] Further, the Rural Policy Research Institute expressed concern about meeting the short- and long-term broadband needs of rural America.[7/]

In the NOI, the Commission identified two sets of challenges associated with meeting the current demand for broadband telecommunications capacity: bandwidth and coverage. With respect to bandwidth, the Commission noted that the copper wire infrastructure terminating in the homes of Americans -- the "last mile" -- "is not broad or fast enough to be called advanced."[8/] With regard to geographic coverage, the Commission recognized that the terrestrial, wire-based broadband "backbone" either does not serve numerous geographic areas, or serves those areas inadequately.[9/] These challenges are particularly difficult to overcome in rural and hard-to-reach areas.

As SkyBridge demonstrated in its comments, however, the SkyBridge system provides one of the most effective means of addressing the needs of rural America identified by commenters. SkyBridge pointed out that broadband satellite technology can overcome the existing technical barriers to the provision of advanced telecommunications capability, addressing both the "last mile" and the "high-cost area" obstacles in both urban and rural areas, more rapidly and efficiently than traditional terrestrial networks. SkyBridge will offer

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6/ Id.

7/ RUPRI Comments at 8.

8/ NOI at ¶ 3.

9/ Id.

a solution to the "last mile" problem by transmitting high-bandwidth data from its satellites directly to user terminals inside homes, schools, and businesses. The SkyBridge system will address the "high-cost area" problem by creating access at reasonable cost to broadband networks for rural, high-cost, and sparsely populated areas that do not presently have access to broadband capacity.

SkyBridge will offer instant global access to broadband services, including high-speed Internet access and on-line services, video-conferencing, multimedia entertainment services, and infrastructure links for telephony, wireless local loops and mobile communications. The system will also offer narrowband services for voice, video-conferencing, data transmission and backup longhaul connection. Thus, the SkyBridge network will allow Americans in every part of the country to receive the benefits of services such as telemedicine and distance learning, and to have access to essentially unlimited information databases.

Other commenters recognized the benefits associated with broadband satellite systems, and pointed out that satellite technologies offer a practical solution to the "last mile" problem.[10/] For example, Teledesic noted that "[w]ireless technologies offer a solution to the 'last mile' problem. The cost of accessing wireless services is largely indifferent to location. This is especially true for satellite services, which can cover vast regions without the need to

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10/ See Teledesic Comments at 3; BellSouth Comments at 26; PanAmSat Comments at 2 ("systems are suited to provide a wide variety of broadband and interactive services, including satellite-delivered Internet services, and can be used with small antennas that make direct-to-home transmission both economical and practical").

install terrestrial transmitting equipment."[11/] In addition, BellSouth Corporation noted that "satellite services can offer inherent technological advantages such as low-cost transmission rates, broad geographic coverage areas, and low operational costs."[12/]

In order to ensure that all Americans are able to realize the benefits of broadband satellite systems, the Commission needs to streamline the licensing process and devote the necessary resources to authorize expeditiously satellites providing broadband services.[13/] Delays in processing satellite license applications jeopardize the rapid build-out of the systems and the economic viability of providing full geographic coverage. For example, SkyBridge's application[14/] seeking authorization to establish a new broadband nongeostationary orbit ("NGSO") fixed satellite service ("FSS") system has been pending since February 1997, and its related petition for rulemaking[15/] has been pending since

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11/ Teledesic Comments at 3.

12/ BellSouth Comments at 26.

13/ See also, Teledesic Comments at 5-6 (the Commission could promote the public interest by eliminating regulatory hurdles when possible, and by acting expeditiously on applications and other requests pending before it).

14/ See Application of SkyBridge for Authority to Launch and Operate a Global Network of Low Earth Orbit Communications Satellites Providing Broadband Services in the Fixed Satellite Service, File No. 48-SAT-P/LA-97, filed Feb. 28, 1997; Amendment, File No. 89-SAT-AMEND-97, filed July 3, 1997; Further Amendment, filed June 30, 1998 ("SkyBridge Application").

15/ See SkyBridge's Petition for Rulemaking: Amendment of the Commission's Rules to Permit Operations of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the 10.7-2.7 GHz, 12.75-13.25 GHz, 13.75-14.5 GHz, and 17.3-17.8 GHz Bands, and to Establish Technical Rules Governing NGSO FSS Operations in these Bands, RM No. 9147, filed July 3, 1997.

July 1997. If the Commission is fully to effectuate its Congressional mandate to make advanced telecommunications capacity available to all Americans, it must act swiftly and decisively to authorize the deployment of systems capable of providing such services.

II. Reasonable Band Sharing Can Increase Broadband Availability, Rather than Constrain It.

Making the most efficient use of the radio spectrum is absolutely essential if the Commission is to effectuate the Congressional mandate to make advanced telecommunications services available to all Americans.[16/] Where technology allows sharing of spectrum, the Commission should not stand in the way. SkyBridge urges the Commission to support sharing not just domestically but at the ITU and other international fora in order to maximize usage of bands and access to advanced telecommunications services.

Both PanAmSat and Teledesic argue that NGSO sharing of spectrum will undermine development of the geostationary ("GSO") FSS broadband systems.[17/] They point to the Commission's conclusions in the 28 GHz Proceeding as evidence that band sharing is not possible.[18/] But the Commission's conclusion not to allow frequency sharing in the 28 GHz band was based upon its specific finding that GSO systems were not capable of sharing

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16/ See *e.g.*, 47 U.S.C. §§ 157, 303(g).

17/ PanAmSat Comments at 3-4; Teledesic Comments at 8. Both PanAmSat and Teledesic refer specifically to sharing in the Ka-band. Their arguments have no validity either for Ka- or Ku-band.

18/ PanAmSat Comments at 3; Teledesic Comments at 7 (citing Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, and to Establish Rules and Policies for LMDS and for FSS, 11 FCC Rcd 19005 (1996) ("28 GHz Proceeding")).

because of their design.[19] Thus, the outcome of the 28 GHz Proceeding does not provide precedent for other bands where the facts differ significantly or for even the 28 GHz band, if technology has evolved.

SkyBridge urges the Commission to recognize that the ability of a given satellite system to share spectrum with any other satellite or terrestrial system is largely a function of the system's architecture. As SkyBridge has demonstrated in the context of its license application, a satellite system can be designed from the start to be capable of sharing with existing systems, both GSO and terrestrial.[20] The SkyBridge satellites do not require either a new allocation or an exclusive license to operate. Rather, SkyBridge proposes to operate systems at both the Ka- and Ku-band, on a non-exclusive basis. Because of its system design, the SkyBridge system will not degrade the quality of service or availability of GSO or terrestrial links, and will impose no operational constraints on operators of GSO or terrestrial systems.

With respect to sharing with GSO systems, the NGSO operator must design its constellation to ensure that it can avoid interference to GSO customers while still providing uninterrupted service to its own customers. The SkyBridge system architecture represents one example of how this can be accomplished at relatively low cost. With respect to

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19/ 28 GHz Proceeding, 11 FCC Rcd at 19016 ("Co-frequency sharing between either GSO/FSS or NGSO/FSS ubiquitously deployed terminals and LMDS with its ubiquitously deployed subscriber terminals is not feasible at this time").

20/ SkyBridge Application at Section V; Opposition of SkyBridge to Petitions to Deny at Sections V and VI (filed Jan. 20, 1998).

terrestrial sharing, while parties such as Teledesic[21/] are correct that it is different for "ubiquitous" user terminals to share spectrum with terrestrial systems, that problem does not preclude operation of NGSO systems. As SkyBridge has proposed -- and as the Commission has recognized in a recent notice of proposed rulemaking[22/] ubiquitous user terminals generally should be restricted to bands with little or no terrestrial use, while non-ubiquitous "gateway" terminals can share spectrum with terrestrial systems with little or no inconvenience to one another.

21/ Teledesic Comments at 8.

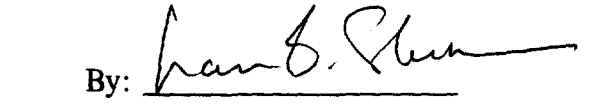
22/ Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the Frequency Bands for Broadcast Satellite Service Use, FCC 98-235 (rel. Sept. 18, 1998).

II. CONCLUSION

By supporting the development and market entry of new satellite-based technologies such as the SkyBridge system, the Commission will spur competition in the broadband industry and can thereby meet the challenge of accelerating the deployment of advanced telecommunications capability to all Americans on an equal basis. Such capabilities will undoubtedly prove beneficial to citizens across the country, and demonstrate the United States' global leadership in the information revolution.

Respectfully submitted,

SKYBRIDGE L.L.C.

By: 

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